

Methods

Fish were collected using a variety of sampling gear including gill nets, trawls, hoop nets, and/or electrofishing (specific collection methods are listed in the individual station summaries). Each fish was weighed to the nearest gram and measured to the nearest millimeter (all lengths are total lengths). Each fish was then wrapped in aluminum foil, and placed in a new plastic bag. Samples were then placed on ice and frozen until sample preparation.

Sample preparation, which followed DEM's standard operating procedures, (EHNR, 1989b) consisted of three separate procedures, cleaning, filleting, and blending. The cleaning procedure involves the washing of all utensils, knives, blenders, and working surfaces in the following order:

1. soap and water wash
2. 15% nitric acid rinse
3. pesticide grade hexane/methylene chloride/acetone rinse
4. distilled water rinse

After scaling, a fillet was removed from each fish. A fillet is defined as all flesh and skin from head to tail and from top of the back to the belly. The skin was removed from all catfish and bullheads. For a single sample the fillet is then homogenized and placed in an aluminum container and sent to the lab for analysis. For composite samples, the individual fillets are combined then homogenized. For very large fish, only a portion of the fillet is processed.

Samples were analyzed for arsenic and selenium by the graphite furnace method which incorporates a nitric/hydrochloric acid digestion. Samples were analyzed for cadmium, chromium, copper, nickel, lead, and zinc by the inductive coupled plasma method which also incorporates a nitric/hydrochloric acid digestion. Mercury was analyzed by the cold vapor method which incorporates an acid permanganate digestion. Organics were analyzed by solvent extraction followed by a florisil cleanup and gas chromatograph analysis.